

DANILOVSKAYA, V.V. Cand Tech Sci -- (diss) "On the problem of the <sup>stressed</sup> ~~strained~~  
and deformed state of curved sections of steam pipes." Len, 1959. 15 pp  
(Len Shipbuilding Inst), 250 copies (KL, 48-59, 114)

S/124/62/000/009/010/026  
A001/A101

26.2120  
AUTHORS: Topunov, A. M., Danilovskiy, A. G.

TITLE: On effect of the M number on the applicability limit of the theory of cylindrical turbine stage

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 9, 1962, 36, abstract 9B232 ("Tr. Leningr. korablestroit. in-ta", 1961, no. 33, 81 - 92)

TEXT: The authors analyze gas discharge in the intercrown section of a turbine behind the nozzle guidance apparatus which produces vorticity of the flow at a constant angle  $\alpha$ . They investigate theoretically the dependence of the discharge on the value of bushing ratio, angle  $\alpha$  within the range from  $10^\circ$  to  $90^\circ$ , and Mach's number up to  $M = 4.5$ . An approximate formula for calculating discharge is proposed; it is stated that some "critical" bushing ratio exists below which the total discharge through the section drops with decreasing bushing ratio. ✓B

N. A. Kolokol'tsov

[Abstracter's note: Complete translation]

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L 17303-63

ACCESSION NR: AP3002763

to variation of parameters before the nozzle and behind the blading. General solutions are illustrated by a numerical example which gives hub-to-tip gas velocities and pressure, as well as axial velocity and radial acceleration. Orig. art. has: 4 figures and 22 formulas.

ASSOCIATION: Leningradskiy Korablistroitel'nyy institut (Leningrad Ship-building Institute)

SUBMITTED: 12Oct62

DATE ACQ: 24Jul63

ENCL: 00

SUB CODE: EE

NO REF SOV: 009

OTHER: 000

Card 2/2

L 33024-66 EWI(1)/EWP(m)/EWP(f)/L-2 WW

ACC NR: AP6014395

(N)

SOURCE CODE: UR/0096/65/000/001/0035/0038

AUTHOR: Danilovskiy, A. G. (Engineer); Topumov, A. M. (Candidate of technical sciences)

ORG: Leningrad Shipbuilding Institute (Leningradskiy korablestroitel'nyy institut)

48  
B

TITLE: Improvement of the flow through sections of turbines by an opening at the foot of the vanes

SOURCE: Teploenergetika, no. 1, 1966, 35-38

TOPIC TAGS: steam turbine, turbine blade

ABSTRACT: The article gives the results of an investigation of flow through annular grids with pitched blades, with different angles of taper of the inner boundary surface. The article presents a series of figures showing different geometries of the flow through section of the turbine with various pitches of the vanes. It was found, in general, that the use of a pitch of the vanes with relation to the radius can substantially improve the flow conditions at the foot of the vanes, especially with an open flow through section at the socket. With a pitch of the vanes relative to the radius there was observed a complex

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UDC: 62-135:533.6.001.5

L 33024-66

ACC NR: AP6014395

flow structure, mainly depending on the form of the boundary surface. By varying the form of the boundary surface, with a gradual positive increase in the pitch of the vanes, it is possible to change the gradient of the static pressure beyond the nozzle. Orig. art. has: 6 figures.

SUB CODE: 10/ SUBM DATE: none/ ORIG REF: 005

Card 2/2

*Jo*

L 07547-67 EWT(d)/EWT(l)/EWP(m)/EWT(m)/EWP(F) WW/DJ

ACC NR: AP6029864

(N)

SOURCE CODE: UR/0096/66/000/009/0078/0080

AUTHOR: Danilovskiy, A. G. (Engineer, Dissertant); Topunov, A. M. (Candidate of technical sciences) 43  
B

ORG: Leningrad Shipbuilding Institute (Leningradskiy korablestroitel'nyy institut)

TITLE: Effect of the elimination of taper in the nozzle unit on the characteristics of a turbine stage )"

SOURCE: Teploenergetika, no. 9, 1966, 78-80

TOPIC TAGS: turbine stage, nozzle design

ABSTRACT: The investigation was carried out in two stages with  $D_{av}/l = 3$  and 5, in an open type unit. The basic feature of the unit was a single suction system which permitted very accurate measurement of the total moment of the hydraulic braking. The working body was air. The tests were made at small Mach numbers, in the zone of self-similarity with respect to the Reynolds number. In the experiments, measurements were made of the overall characteristics--the efficiency of the stages, the moment, and the reactions at the base and the periphery of the blades. Results are shown in graphic form. It was found that elimination of the taper in the nozzle unit exerts a substantial effect on the characteristics of the turbine stages. It improves the structure of the flow in the stages, and reduces the difference in the reaction at the

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UDC: 621.165.533.6 001 5

L 07547-67

ACC NR: AP6029864

tip and at the base of the blades. Use of a diagonal working wheel somewhat reduces the effect of elimination of the taper in the nozzle unit. Orig. art. has: 6 figures. D

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 007

10/

Card 2/2 29/2

DANILOVSKIY, A.I., inzh.

Replacement equipment for the OF-5 machine for leveling the surface of milled peat fields. Torf.prom. 37 no.2:37 '60.  
(MIRA 13:6)

1. Zavolzhskoye torfopredpriyatiye.  
(Peat machinery)

DANILOVSKIY, A. P.

20825. Danilovskiy, A. P. Vsenarodnoye delu. (Bor'ba s preobrazovaniye prirody. Tselinskiy rayon Rost. obl. ochesk). Don. No. 1, 1949, s. 138-48.

SO: LETO IS ZHURNAL STATEY - Vol. 28, Moskva, 1949.

*DANILOVSKIY, I. V.*

15-1957-7-9118

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7,  
p 42 (USSR)

AUTHOR: Danilovskiy, I. V.

TITLE: Supporting Lithologic-Stratigraphic Section of the  
Deposits of the Scandinavian Glaciation on the Russian  
Plain and Quaternary Index Molluscs (Opornyy litologo-  
stratigraficheskiy razrez otlozheniy skandinavskogo  
oledeniya Russkoy ravniny i rukovodyashchiye chet-  
vertichnyye molluski)

PERIODICAL: Tr. Vses. n.-i. geol. in-ta, 1955, vol 9, p 202

ABSTRACT: Bibliographic entry.

Card 1/1

DANILOVSKIY, I.V.

History of Quaternary mollusks in the U.S.S.R. and their  
significance for the stratigraphy of Quaternary sediments.  
Inform.sbor.VSEGEI no.47:75-96 '61. (MIRA 15:4)  
(Mollusks, Fossil)

124-57-1-1190

Translation from: Referativnyy zhurnal, Mekhanika 1957, Nr 1, p 163 (USSR)

AUTHOR: Danilovskiy, M. P.

TITLE: The Effect of the Rigidity of the Joints on the Stressed State of Prestressed Reinforced-concrete Frames (Vliyaniye zhestkosti uzlov na napyazhennoye sostoyaniye zhelezobetonnykh predvaritel'no napyazhennykh ferm)

PERIODICAL: Tr. Khabarov. in-ta inzh. zh. -d transp., 1956, Nr 9, pp 41-60

ABSTRACT: Bibliographic entry

1. Reinforced concrete structure--Stresses--Bibliography

Card 1/1

DANILOVSKIY, M. P., Cand. of Tech. Sci. --- (diss) -- "The Influence of Elasticity of the Joints of Prestressed Reinforced-Concrete Beams Under Stress," Vladivostok, 1959, 12 pp (Siberian Division of the Far Eastern Branch im V. L. Komarov, Academy of Sciences USSR) (KI, 8-60, 116)

DANILOVSKIY, M.P., kand. tekhn. nauk

Design of compressed and bent and of stretched and bent elements  
of prestressed concrete trusses. Sbor. trud. Khab. avt.-dor. inst.  
no.1:5-11 '62. (MIRA 18:i)

L 07267-67 EWT(1)/EWT(m) WW/JR/OD  
ACC NR: AT6025307 SOURCE CODE: UR/0000/66/000/001/0065/0071

AUTHOR: Mitenkov, F. M.; Obukhov, P. I.; Danilovskiy, V. S. 26  
B+1

ORG: none

TITLE: Influence of the <sup>19</sup>coolant flow on the transient processes occurring in a nuclear power installation

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Upravleniye yadernymi energeticheskimi ustanovkami (Control of nuclear power plants), no. 1. Moscow, Atomizdat, 1966, 65-71

TOPIC TAGS: nuclear reactor coolant, reactor transient, water cooled nuclear reactor, nuclear reactor control/~~reactor control~~

ABSTRACT: The authors report an investigation of the influence of coolant flow on the transient processes occurring in a two-loop nuclear steam generator with a water-water non-boiling reactor, for the purpose of determining qualitative relations between the corresponding system parameters and the amount of flow of the liquid (other conditions being equal). The response of the system to the following nonstationary conditions was determined: 1. External cooling of the reactor while maintaining nominal circulation of the coolant in the first loop. 2. Operation of the emergency protection with simultaneous variation of the circulation of the coolant to 1/3 nominal. 3. Jump in reactivity during the self-regulation mode. 4. Jumpwise increasing coolant circulation from 1/3 to nominal. Plots of the measured quantities, obtained by solving the

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ACC NR: AT6025307

system of equations under these conditions, using the EMU-10 analog computer, are presented. The plots show the nominal heating against nominal coolant flow, the power, average coolant temperature, reactor-outlet temperature, and reactivity against time for different rates of flow, the maximum deviation of the coolant temperature from nominal against the nominal flow, the power variation during self regulation at different rates of flow, and the maximum deviation of power against coolant flow. A diagram of the system and the differential equations solved with a computer are given in a companion paper in the same source (p. 82, Acc. Nr. AT6025309). The results show that an increase in the regular flow increases the speed of reactor shutdown cooling, reduces the deviation of the temperature from nominal, reduces the transient times, and reduces the maximum power deviation. It follows from the results that the main parameters of a nuclear power system with water-water non-boiling reactor (deviations of the power and temperature under nonstationary conditions) and the required efficiency of the control units under emergency conditions depend significantly on the nominal flow of coolant in the reactor. Orig. art. has: 6 figures.

SUB CODE: 18/      SUBM DATE: 27Dec65/      ORIG REF: 002/      OTH REF: 001

Card 2/2 *pla*

L 07269-67 EWT(m) GD  
ACC NR: AT6025309 SOURCE CODE: UR/0000/66/000/001/0082/0091

AUTHOR: Mitenkov, F. M.; Obukhov, P. I.; Danilovskiy, V. S.

35  
B+/

ORG: none

TITLE: Influence of the temperature coefficient of reactivity on the character of the transient and emergency modes in a nuclear power station

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Upravleniye yadernymi energeticheskimi ustanovkami (Control of nuclear power plants), no. 1. Moscow, Atomizdat, 1966, 82-91

TOPIC TAGS: nuclear reactor power, reactor transient, nuclear safety, nuclear reactor coolant, temperature dependence, nuclear reactor control, water cooled reactor/ EMU analog computer

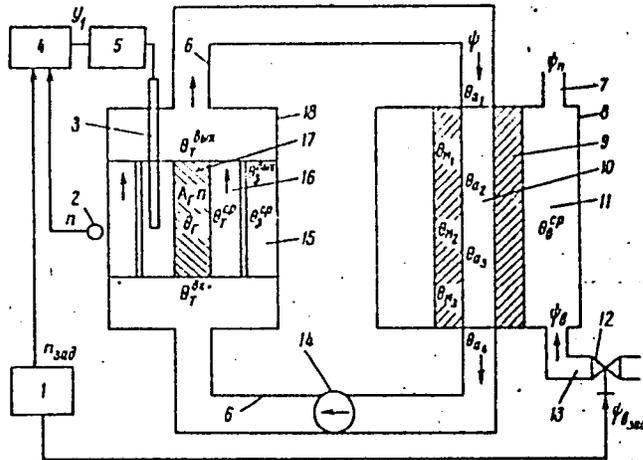
ABSTRACT: This is a companion to another paper in this same source (p. 65, Acc. Nr. AT6025307) dealing with the influence of the coolant flow on the transients in a nuclear power station. The present article presents the main results of an investigation of the dependence of the transients on the negative temperature coefficient for a two-loop system with water-water heterogeneous reactor. The diagram of the system is shown in Fig. 1 together with the control elements. The authors have set up mathematical models of the reactor and of the steam generator, writing out the appropriate differential equations and solving them with the aid of an EMU-10 analog computer. The tests consisted of determining the response of the system to a jump-like increase in

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L 07269-67

ACC NR: AT6025309

Fig. 1. Computational model of nuclear power station. 1 - Set point, 2 - power detector, 3 - control devices, 4 - comparison block, 5 - control drive, 6 - pipe, 7 - outlet pipe, 8 - steam generator, 9 - wall, 10 - coolant of loop 1, 11 - coolant of loop 2, 12 - feedwater valve, 13 - feedwater pipe, 14 - circulating pump, 15 - moderator, 16 - coolant, 17 - fuel rod, 18 - reactor.



the coolant flow in the reactor, to operation of the scram rod with subsequent cooling down of the first loop, and operation of the scram rods with simultaneous decrease of the flow in the first loop. In all

these tests, a numerical analysis was made of the influence of the temperature coefficient on the character of variation of the reactor power and on the coolant temperature under the transient and emergency conditions. The transient processes with and without self regulation are compared for different temperature coefficients of re-

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L 07269-67

ACC NR: AT6025309

activity. The results point to the need for taking into account both the temperature coefficient and the concrete character of the emergency conditions that characterize the specific nuclear power installation. Orig. art. has: 4 figures and 8 formulas.

SUB CODE: 18/    SUBM DATE: 27Dec65/    ORIG REF: 003/    OTH REF: 001

Card

3/3 *la*

DANILOVSKIY, Yu.P.

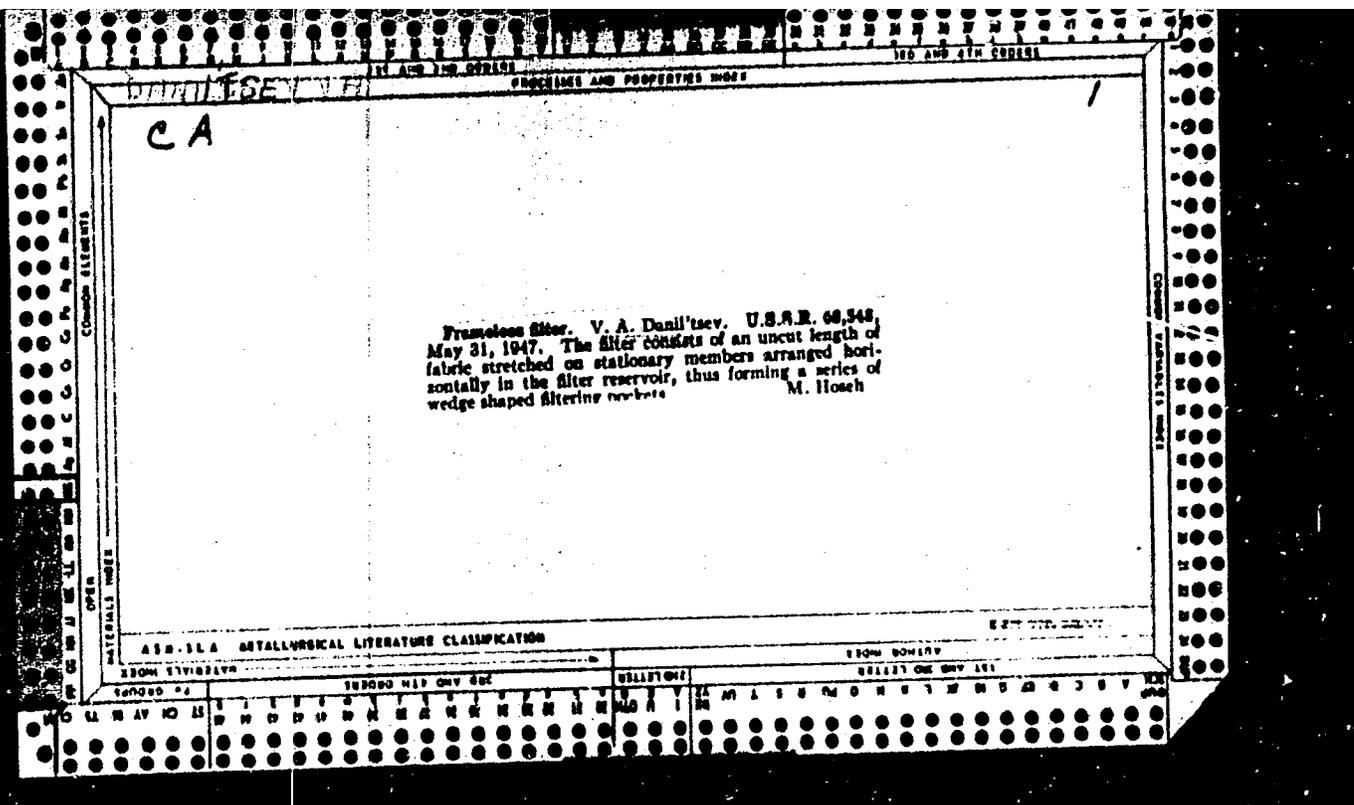
Draining the cavities following extrapleural pneumonolysis.  
Zdrav. kazakh. 22 no.1:18-21 '62. (MIRA 15:3)

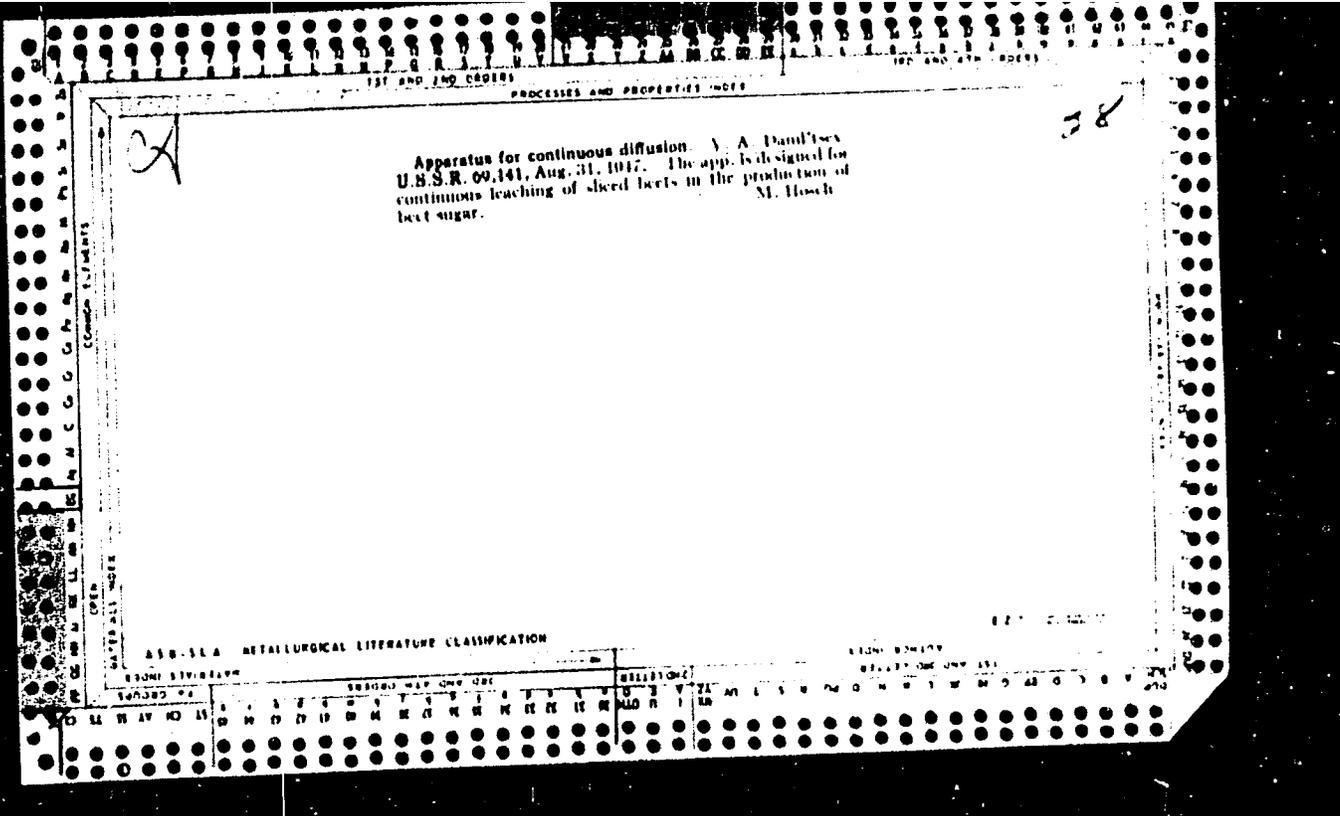
1. Iz legochno-khirurgicheskoy bol'nitsy sanatoriya Borovoye  
(glavnyy vrach - A.N. Tiunova).  
(PLEURA--SURGERY) (DRAINAGE, SURGICAL)

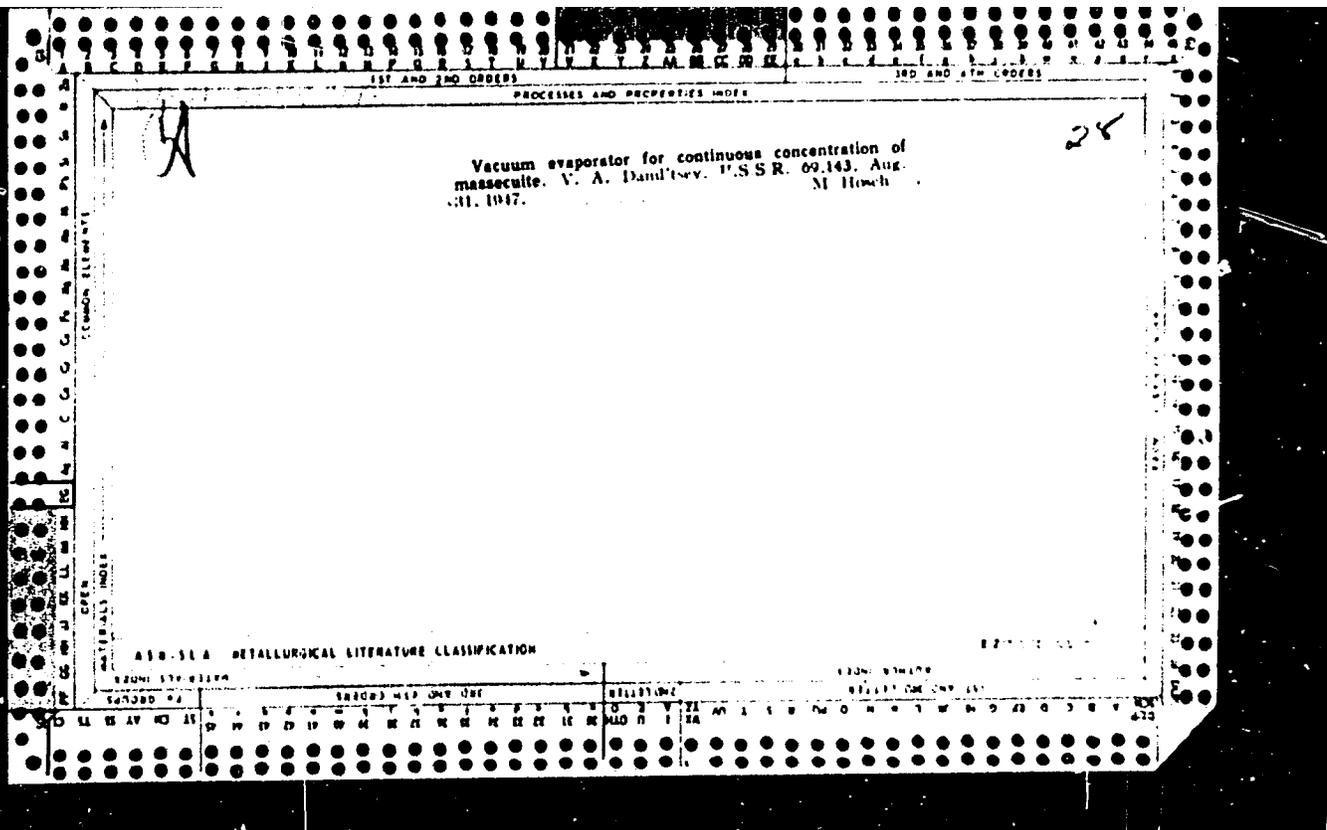
DANILOVSKIY, Yu.P.

Analysis of the effectiveness of surgical treatment of pulmonary tuberculosis. *Zdravookhr. Kazakh.* 23 no.1:33-37 '63  
(MIRA 17:2)

1. 1. Iz legochno-khirurgicheskoy bol'nitsy sanatoriya "Borovoye".









*DANIL' TSHV, V.A.*

DANIL'TSHV, V.A.; MATKUSH, Ya.O.

~~.....~~  
Determining total fermentable sugars in feed molasses. Sakh. prom.  
31 no.10:31-32 0 '57. (MIRA 11:1)

1. Gnivan'skaya gruppovaya laboratoriya.  
(Molasses--Analysis) (Sugars--Analysis)

DANIL'TSEV, V.A.; MATEUSH, N.I.

Device for rapid determination of dry substances in beet  
pulp and cossettes. Sakh.prom. 33 no.3:37-38 Mr '59.

(MIRA 12:4)

1. Gnivan'skaya gruppovaya laboratoriya.  
(Sugar beets)  
(Laboratories--Equipment and supplies)

SOKOLOVSKIY, A.A.; BREZINSKIY, B.I.; DANIL'TSEV, V.A.

Operation of the RT continuous diffuser at the Turbov Sugar  
Factory. Sakh.prom. 34 no.2:40-43 F '60.

(MIRA 13:5)

1. Vinnitskiy sakhsveklotrest.  
(Turbov--Sugar machinery) (Diffusers)

DANIL'TSEV, V.A.

Use of polyacrylamide in the filtration of sugar-beet juices.  
Sakh. prom. 35 no. 1:22-24 Ja '61. (MIRA 14:1)

1. Gnivanskaya gruppovaya laboratoriya.  
(Gnivan'--Sugar manufacture) (Acrylamide)

DANIL'TSEV, V.A.; MATEUSH, Ya.I.

Loss of sugar in evaporation. Sakh. prom. 35 no. 8:23-25 Ag  
'61. (MIRA 14:8)

1. Gnivanskaya gruppovaya laboratoriya.  
(Sugar manufacture)

DANIL'TSEV, V.A.

Operations of the Gnivan Group Laboratory. Sakh.prom. 36  
no.5:43-46 My '62. (MIRA 15:5)

1. Gnivanskaya gruppovaya laboratoriya.  
(Gnivan--Sugar industry--Production control)  
(Testing laboratories)

BARABANOV, M.I.; BARABANOVA, K.A.; DANIL'TSEV, V.A.; MATEUSH, Ya.I.

Pay more attention to the second saturation. Sakh.prom. 36  
no.4:17-19 Ap '62. (MIRA 15:5)

1. Kiyevskiy tekhnologicheskoy institut pishchevoy promyshlennosti imeni Mikoyana (for Barabanov).
2. Tsentral'nyy nauchno-issledovatel'skiy institut sakharnoy promyshlennosti (for Barabanova).
3. Gnivanskaya gruppovaya laboratoriya (for Danil'tsev, Mateush).  
(Sugar manufacture)

DANIL'TSEV, V.A.

Innovator of the Turbo Factory, S.D. Gavriluk. Sakh. prom.  
36 no.7:53-54 J1 '62. (MIRA 17:1)

1. Gnivanskaya gruppovaya laboratoriya.

L 26790-66 EWP(k)/EWT(m)/T DJ

ACC NR: AP6017441

SOURCE CODE: UR/0292/65/000/008/0018/0024

AUTHOR: Bogdanov, O. I. (Candidate of technical sciences); Danil'tsev, V. G. 26  
(Engineer) B

ORG: none

TITLE: Hydrostatic spherical thrust bearing 17

SOURCE: Elektrotehnika, no. 8, 1965, 18-24

TOPIC TAGS: antifriction bearing, lubrication

ABSTRACT: Recently hydrostatic sliding bearings are becoming widely used in power machine building. In such bearings the lubricant is introduced into friction gaps under pressure. The pressures are chosen in such a way as to equilibrate the external load by means of a specified thickness of the lubricant. "The present article describes the methods for the design of hydrostatic spherical thrust bearings with a central high pressure chamber and annular lubricant supplying chambers. It covers spherical thrust bearings with diffusor gaps, with central lubricant introduction, with constant gap between the pivot and the bearing, and with a confusor gap. Results of the calculations show that in the case of central lubricant-introducing chambers the best thrust bearings are those with a ratio of lubricant supply opening angle to bearing angle of approx. 0.5. In addition, the thrust bearing with a confusor gap exhibits the best characteristics and is easiest to produce. Orig. art. has: 8 figures and 54 formulas. [JPRS]

SUB CODE: 13, 11 / SUBM DATE: none

C-rod 1/1 CC

UDC: 621.822.2.001.8 2

BOGDANOV, O.V., doc. Lvkhbank, dotsent; DANIL'TSEV, V.G., inzh.

Hydrostatic spherical thrust bearing with a tapering gap. Vest.  
mashinstr. 45 no.9:29-30 S '65.

(MIRA 18:10)

BOGDANOV, O.I., kand. tekhn. nauk, dotsent; DA IL'ITSKY, V.G., aspirant

Design of a hydrostatic spherical thrust bearing with a  
central lubricant-supply chamber. Izv. vys. ucheb. zav.;  
mashinost. no. 10:52-55 '65 (MIRA 19:1)

1. Submitted March 11, 1964.

DANILTSEV, Y.S.M., MEYMAN, H.N., VLADIMIRSKIY, V.V., KOZHEVNIKOV, D.G.  
(U.S.S.R.)

Ejection scheme for an A. G. 7 GeV machine<sup>6</sup>

CERN-Symposium on High Energy Accelerators and  
Pion Physics

Geneva 11-23 June 56  
In Branch #5

DANILITSEY, Ye. N.

VLADIMIRSKIY, V.V.; GOL'DIN, L.L.; DANIL'TSEY, Ye. N.; KOSHKAREV, D.G.;  
MEYMAN, N.N.

Ejection of proton beams from the 7 BEV alternating-gradient  
accelerator. Prib. i tekh. eksp. no. 3:31-35 N-D '56.  
(Particle accelerators) (MLBA 10:2)

DANILTSEV, E. N., KOSHKAREV, D. G., VLADIMIRSKIY, V. V., GOLDIN, L. L.  
MEYMAN, N. N.

"Deflection of the Beam of a 7 GeV Strong Focusing Proton  
Accelerator, " paper presented at CERN Symposium, 1956, appearing  
in Nuclear Instruments, No. 1, pp. 21-30, 1957

DANIL'TSEV, Ye. N

10745

5/120/62/000/004/011/047  
E140/E420

AUTHORS: Vladimirovskiy, V.V., Koshkarev, D.G., Onosovskiy, K.K.,  
Smolyankina, T.G., Smirnitckiy, V.A., Danil'tsev, Ye.N.,  
Lazarev, N.V., Lapitskiy, Yu.Ya., Pligin, Yu.S.,  
Batalin, V.A.

TITLE: The ion guide and beam-introduction system of the  
proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 70-75

TEXT: From experimental work on the 4 Mev electrostatic generator  
used for beam injection, it was found that the diameter of the  
matched beam in the accelerator chamber would be not less than  
about 25 mm. The injection system was therefore designed to use  
plane condensers instead of slot condensers. As the phase volume  
of the beam was four times greater than expected, the focusing was  
strengthened by the use of quadrupole lenses. The beam  
introduction system is shown in Fig.2, where  $C_{1,2,3}$  are  
condensers,  $C_1$  is constructed from stainless steel plates,  
 $\ell = 600$  mm,  $h = 35$  mm, bent to a radius of 4000 mm,  
 $V = 80$  kV,  $\omega = 171$  mr,  $\Delta V/V = 1.5 \times 10^{-3}$ .  
Card 1/3

0

The ion guide and beam-introduction ... S/120/62/000/004/011/047  
E140/E420

$C_2$  has  $\ell = 220$  mm,  $h = 20$  mm,  $V = 62$  kV,  $\omega = 85$  mr and  $\Delta V/V = 2.2 \times 10^{-3}$ ,  $C_3$  has  $\ell = 220$  mm,  $h = 80$  mm,  $V = 56$  kV,  $\omega = 9.6$  mr,  $\Delta V/V = 1 \times 10^{-2}$ , where  $\ell$  is length of the plates,  $h$  is the distance between them,  $\omega$  is the angle through which the beam is bent and  $\Delta V/V$  is the required stability. Calculation on the design of the system and its adjustment are given, in particular design details are presented on the first condenser  $C_1$ , the electrostatic quadrupole lenses, the ion guide and the magnetic quadrupole lenses. The electrostatic quadrupole lens consists essentially of four stainless steel plates with a hyperbolic profile and the magnetic quadrupole lens is calculated for a gradient of 350 Oe/cm and a length of 15 cm with a magnetic aperture of 60 mm. There are 12 figures.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki  
GKAE (Institute of Theoretical and Experimental  
Physics GKAE)

SUBMITTED: March 31, 1962  
Card 2/3

L 13374-63

BDS/EWT(1)/EWT(M) AFFTC/ASD IJP(G)

ACCESSION NR: AP002/15

S/0120/63/000/003/0020/0024

AUTHOR: Danil'tsev, Ye. N.; Plotnikov, V. K.

59  
54

TITLE: Magnetic quadrupole lenses for drift-tube linear accelerators  
2. Measurement of the field nonlinearity of flat-pole lenses

SOURCE: Pribery\* 1 tekhnika eksperimenta, no. 3, 1963, 20-24

TOPIC TAGS: magnetic quadrupole lens, linear accelerator

ABSTRACT: Methods for nonlinearity measurements by means of harmonic coils are described. Results are submitted of field measurements on flat-pole lenses with the suppressed 5-th harmonic of the field. The flat pole shape is compared to the pole shape of the CERN linear accelerator. A method is described of correcting the field distortions caused by the winding and the deviation of actual pole shape from theoretical. The authors find that: (1) the above field distortion is usually very small; (2) by varying the pole width, the correction can be readily introduced; (3) flat poles are superior to those used in the CERN accelerator as far as field nonlinearity is concerned. "In conclusion, the authors are thankful

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ACCESSION NR: AP3002713

5

to I. M. Kapchinskiy, under whose supervision the work was done, to G.M. Yeritsyan and V. I. Moguchev, who took part in developing the measuring methods, and also to the group of mathematicians under R. S. Qufer who supplied the numerical calculation of the correcting curve." Orig. art. has: 4 figures, 13 formulas, and 1 table.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki (Institute of the Theoretical and Experimental Physics)

SUBMITTED: 16Jul62

DATE ACQ: 12Jul63

ENCL: 00

SUB CODE: NS, SD

NO REF SOV: 003

OTHER: 000

Card 2/2

L 10727-63 EWA(k)/IWP(j)/EWT(1)/EWP(q)/EWT(m)/EDS/FED/T-2/3W2/ES(t)-2/  
EEC(b)-2 AFPTC/ASD/ESD-3/ADC/APCC/APWL Po-4/Po-4/PL-4 RM/WH/LJP(C)/WG/K/EH/JHB  
ACCESSION NR: AP3003161 S/0056/63/044/006/2193/2194

AUTHOR: Danil'tseva, G. Ye.; Zubov, V. A.; Sushchinskiy, M. M.; Shuvalov,  
I. K.

TITLE: Application of the laser to the study of Raman spectra of dye powders

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 2193-2194

TOPIC TAGS: laser applications, Raman spectra, dye powders

ABSTRACT: A 6943 Å ruby laser has been applied to the study of Raman spectra in dye powders. A spectrograph with a diffraction grating of 800 lines/mm was used in the investigation. A lens focused the laser light on the powder samples, which were placed directly before the slit of the spectrograph. A low-power cryogenic ruby laser with 1-1.8 kilojoule pumping power was used; 30-100 flashes were required for photographic registration at gap widths of 0.07-0.1 mm, which constitutes 8-12 cm<sup>-1</sup> in the given spectral region. Tests conducted with a number of different powders including 4,4'-azoxyanisole

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ACCESSION NR: AF9003161

(bright yellow) and anisal-para-aminoazobenzene (red) showed that lasers are quite suitable for studying Raman spectra of dye powders. "The authors thank M. D. Galanin and A. M. Leontovich for the use of their ruby laser." Orig. art. has: 1 figure. 3

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR  
(Institute of Physics, Academy of Sciences SSSR)

SUBMITTED: 12Apr63      DATE ACQ: 23Jul63      ENCL: 00

SUB CODE: 00      NO REF SOV: 000      OTHER: 001

*Qy/afk*  
Card 2/2

1 61/12-65 E7(L)/A 41(9)

ACCESSION NR: AR5012273

UR/0058/65/000/003/D045/D095

SOURCE: Ref. zh. Fizike, Abs. D446

AUTHOR: Danil'tseva, G. Ya.; Zubov, V. A.; Sushchinskiy, M. M.; Shuvalov, I. K.

TITLE: Investigation of the Raman spectra of powders in a wide spectral region

CITED SOURCE: Tr. Koms. ob. spektroskopii, AN SSSR, vyp. 1, 1964, 696-703

TOPIC TAGS: Raman spectrum; spectrographic analysis

TRANSLATION: Methods are proposed for producing and analyzing the Raman spectra of powders. These methods are designed for eliminating the effect which the degree of powder dispersion, absorption of light in the powder, and other factors have on the intensity of the Raman lines. Theory and experiment are compared. Methods are described for studying powders in a wide spectral range, using various lines of mercury and cadmium as well as a ruby laser for excitation of Raman spectra. The various methods for producing Raman spectra are compared.

SUB CODE: OP

ENCL: 00

Card 1/1

PETRIKEVICH, S.B.; DANIL'TSEVA, G.Ye.; MEYSEL', M.N.

Accumulation and chemical transformation of 3,4-benzopyrene by  
micro-organisms. Dokl. AN SSSR 159 no.2:436-438 N '64.

(MIRA 17:12)

1. Chlen-korrespondent AN SSSR (for Meysel').

ZELENIN, A.V.; BARSKIY, V.Ye.; DANIL'TSEVA, G.Ye.

Problems of biology and medicine at the 13th All-Union Conference  
on Luminescence. Izv. AN SSSR. Ser. biol. no.2:319-320 Mr-Apr '65.  
(MIRA 18:4)

DANILUK, Edward, inz.

A new assortment of tools and universal grips; lathe grips and pneumatic vices. *Mechanik* 35 no.5:269-270 My '62.

1. Fabryka Przyrzadow i Uchwytow, Bialystok.

KOSCIALKOWSKI, Wladyslaw; UBRANSKI, Zenon; ZLOMSKI, Zenon; ~~DANILUK, Wladzimir~~  
(Warsaw)

Mutural interdependence of the human factor and mechanisms in the  
origin of causes of building accidents. Przegl budowl i bud mieszk  
2/ (i.e. 37] no.3:148-154 Mr '65.

1. DANILUSHKYN, I.
2. USSR (600)
4. Mine Haulage
7. Let's increase the efficiency of underground transportation. Mast. ugl.  
2, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

DANILYAK, A.Z., uchenyy sekretar'

Public Buildings and Structures Institute. Izv. ASIA no.1:118-  
120 '61. (MIRA 14:7)

1. Institut obshchestvennykh zdaniy i sooruzheniy Akademii  
stroitel'stva i arkhitektury SSSR.  
(Public buildings)

DANILYAK, A.Z.

Institute of Public Buildings. Izv. ASIA 4 no.2:133-134 '62.

(MIRA 15:9)

1. Uchenyy sekretar' Instituta obshchestvennykh zdaniy Akademii  
stroitel'stva i arkhitektury SSSR.  
(Public buildings)

DANILYAK, A.Z., kand. arkhitektury, red.; STOYANOV, N.N., red.izd-va;  
KOROBKOVA, N.I., tekhn. red.

[Public buildings abroad; design and construction]Obshche-  
stvennyye zdania za rubezhom (proektirovanie i stroitel'stvo);  
sbornik statei. Pod obshchei red. A.Z.Daniliaka. Moskva, Gos-  
stroizdat, 1962. 171 p. (MIRA 16:2)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut obshche-  
stvennykh zdaniy i sooruzheniy.  
(Public buildings--Design and construction)

TRIFEL', M.S.; MEKHMANDAROV, S.A.; DANILYAK, B.M.

Cathodic protection of steel structures in seawater by means of pulsating currents. Gaz. delo no.9:31-34 '63.

Behavior of steel in seawater in the polarization of alternating and pulse currents. Ibid.:34-36

(MIRA 17:12)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy dlya dobychi nefi s morskogo dna.

GORDON, Z.L.; DANILYAK, E.G.; DZIKUN, L.N.

Pulmonary lesions in patients with myocardial infarct. Klin. med.  
38 no. 2:47-49 F '60. (MIRA 14:1)  
(HEART--INFARCTION) (LUNGS--DISEASES)

BRISH, V.N.; DANILYA K, N.I.; TUMANCY, B.A.

Combined porudction of starch and and alcohol. Spirt.prom. 26 no.8:  
29-32 '60. (MIRA 13:11)

(Starch) (Alcohol)

DANIYAK, I. D. Prof.

"Gunshot Cranial Osteomyelitis," Vop. neyrokhirurgii, No.4, 1948.

Neurosurgical Clinic, Sci.Res.Inst. Orthopedics and Plastic Surgery, Baku

DANILYAK, I. D. Prof.

"Surgical Treatment of Gunshot Wounds of the humoral Plexus," Vop. neyro-  
khirurgii, 12, No.3, 1948

Neurosurg. Clinic, Inst. Orthopedics and Restorative Surgery

DANILYAK, I. G.

DANILYAK, I. G., studentka 6-go kursa (Moskva)

Examination of functions of the adrenal cortex after secretion of  
17-ketosteroids in bronchial asthma. Klin. med. 32 no.12:67-71  
D '54. (MLRA 8:3)

1. Iz gosptal'noy terapevticheskoy kliniki 1 MOLMI (dir. deystv.  
chlen AMN SSSR A.L. Myasnikov)  
(ADRENAL CORTEX, function test  
in asthma, after 17-ketosteroid secretion)  
(ASTHMA, physiology  
adrenal cortex funct. test after 17-ketosteroid secretion)

DANILYAK, I.G.

KOGAN, B.B., professor. (Moskva); DANILYAK, I.G. (Moskva)

Further research on the treatment of bronchial asthma  
with ACTH. Klin. med. 35 no.2:106-111 F '57 (MLRA 10:4)

1. Iz gospiatal'noy terapevticheskoy kliniki (dir.-deystvitel'nyy  
chlen AMN SSSR prof. A.L. Myasnikov) I Moskovskogo ordena  
Lenina meditsinskogo instituta imeni Sechenova.

(ASTHMA, ther. use)

(ACTH, ther. use

asthma)

DANILYAK, I.G.; LOGINOV, A.S.

Functional state of the adrenal cortex in myocardial infarct and stenocardia. Terap.arkh. 30 no.1:9-13 Ja '58. (MIRA 11:3)

1. Iz kafedry gosptal'noy terapii (zav. - deystvitel'nyy chlen ANU SSSR prof. A.L.Myasnikov) lechebnogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.

(ADRENAL CORTEX, in var. dis.

angina pectoris & myocardial infarct (Rus))

(ANGINA PECTORIS, physiology,

adrenal cortex (Rus))

(MYOCARDIAL INFARCT, physiology,  
same)

RATNER, Nina Aleksandrovna, prof.; DANILYAK, I.G., red.; ZUYEVA, N.K.,  
tekhn.red.

[Hypertension] Gipertonicheskaja bolezni'. Moskva, Gos.izd-vo  
med.lit-ry, 1959. 27 p. (MIRA 13:7)  
(HYPERTENSION)

KOGAN, B.B., prof.; DANILYAK, I.G.

Treatment of bronchial asthma with ACTH and corticosteroids and their mechanisms of activity. Terap.arkh. 31 no.9:35-42 S '59.

(MIRA 12:11)  
1. Iz gospiatal'noy terapevticheskoy kliniki imeni A.A. Ostroumova  
(dir. - deystvitel'nyy chlen AMN SSSR prof. A.L. Myasnikov) i Moskov-  
skogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova i  
filiala kliniki (zav. - prof. B.B. Kogan) na baze bol'nitsy imeni  
Medsantrud.

(ASTHMA ther.)  
(CORTICOTROPIN ther.)  
(ADRENAL CORTEX HORMONES ther.)

SLUTSKIY, Mark Yefimovich; DANILYAK, I.G., red.; ZUYEVA, H.K., tekhn.red.

[Euphyllin] Eufillin. Moskva, Gos.izd-vo med.lit-ry, 1960.  
114 p. (MIRA 13:10)  
(AMINOPHYLLINE)

DANILYUK, I.G.

Outpatient care of persons with various surgical diseases in  
rural areas. Sov.med. 24 no.9:133-138 S '60. (MIRA 13:11)

1. Iz Komsomol'skoy rayonoy bol'nitsy (glavnyy vrach I.G.  
Danilyuk) Vinitskoy oblasti.  
(MEDICINE, RURAL) (SURGERY)

DANILYAK, I.G.; SUCHKOV, A.V.

Complications in the gastrointestinal tract during hormone therapy.  
Sov.med. 24 no.11:123-126 N '60. (MIRA 14:3)

1. Iz gospital'noy terapevticheskoy kliniki (dir. - deystvitel'nyy  
chlen Akademii nauk SSSR prof. A.L.Myasnikov) I Moskovskogo ordena  
Lenina meditsinskogo instituta imeni Sechenova i yeye filiala (zav. -  
prof. B.B.Kogan) na baze klinicheskoy bol'nitsy imeni "Medtsantrud."  
(HORMONE THERAPY) (HEMORRHAGE)  
(PEPTIC ULCER)

KOGAN, B.B., prof.; DANILYAK, I.G.

Prednisone therapy in eosinophilic pneumonia. Terap.arkh. 32  
no.11810-14 N \*60. (MIRA 14:1)

1. Iz filiala (zav. - prof. B.B. Kogan) gosptal'noy terapev-  
ticheskoj kliniki 1 Moskovskogo ordena Lenina meditsinskogo  
instituta imeni I.M. Sechenova na baze klinicheskoy bol'nitsy  
imeni Medsantrud.

(PREGNADIENETRONE)

(EOSINOPHILES)

SHESTAKOV, Sergey Vyacheslavovich, prof.; DANILYAK, I.G., red.;  
LYUDKOVSKAYA, N.I., tekhn. red.

[Cardiac fibrillation; auricular fibrillation and auricular  
flutter] Mertsatel'naia aritmiia; mertsanie i trepetanie pred-  
serdii. 2. izd. Moskva, Medgiz, 1961. 101 p. (MIRA 15:1)  
(ARRHYTHMIA)

DANILYAK, I.G.

Secretion of 17-ketosteroids in chronic hepatitis, cirrhosis of the liver, Botkin's disease. Kaz. med. zhur. no.1:29-30 Ja-F '62.  
(MIRA 15:3)

1. Filial gospiatal'noy terapevticheskoy kliniki (zav. - prof. B.B. Kogan) 1-go Moskovskogo ordena Lenina meditsinskogo instituta im. I.M. Sechenova.

(LIVER--CIRRHOSIS)  
(HEPATITIS, INFECTIOUS)  
(STERIODS)

DANILYAK, I.G.

Thorn's test in bronchial asthma. Klin.med. no.4:64-66 '62.

(MIRA 15:5)

1. Iz gospital'noy terapevticheskoy kliniki (dir. - deystvitel'nyy chlen Akademii nauk SSSR prof. A.L. Myasnikov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova i ee filiala (zav. - prof. B.B. Kogan) na baze klinicheskoy bol'nitsy imeni Medsantrud.

(ASTHMA)

(ADRENAL CORTEX)

DANI LYAK , I.G.

Acute ulcers, erosions and hemorrhages of the stomach and  
intestines in myocardial infarct. Terap.arkh. no.6:46-49  
'62. (MIRA 15:9)

1. Iz filiala (zav. - prof. B.B. Kogan) gospi-tal'noy terapev-  
ticheskoy kliniki (dir. - deystvitel'nyy ohlen AMN SSSR prof.  
A.L. Myasnikov) I Moskovskogo ordena Lenina meditsinskogo insti-  
tuta imeni I.M. Sechenova.  
(GASTROINTESTINAL HEMORRHAGE) (HEART--INFARCTION)  
(PEPTIC ULCER)

DANILYAK, I.G.

Some indices of adrenal cortex function in bronchial asthma.  
Sov.med. 26 no.10:36-42 O '62. (MIRA 15:12)

1. Iz filiala (zav. - zasluzhennyy deyatel' nauki prof. B.B. Kogan) gospi'tal'noy terapevticheskoy kliniki (zav. - deystvitel'-nyy chlen AMN SSSR prof. A.L.Myasnikov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.  
(ADRENAL CORTEX) (ASTHMA)

KOGAN, B.B., prof.; DANILYAK, I.G.

Comparative data from the ACTH and corticosteroid of bronchial  
asthma. Sov.med. 26 no.12:28-32 D '62. (MIRA 1612)

1. Iz filiala (zav. - prof. B.B. Kogan) gosspital'noy terapev-  
ticheskoy kliniki I Moskovskogo ordena Lenina meditsinskogo insti-  
tuta imeni I.M. Sechenova. (ASTHMA) (ACTH) (CORTICOSTEROIDS)

TARASOV, K.Ye., dotsent; SUCHKOV, A.V.; DANILYAK, I.G.

Significance of the laws of formal logic in medical thinking.  
Trudy 1-go MMI 37:150-156 '65.

(MIRA 18:8)

DANILYAK, M.I. [Danyliak, M.I.]; CHEREVKO, N.G. [Cherevko, N.H.]; STARCHAK,  
V.G. [Starchak, V.H.]

Effect of the pH of the medium on determining the activity of the  
"Aspergillus orizae" amylolytic ferments. Khar.prom. no.4:76-78  
O-D '62. (MIRA 16:1)

(Fermentation) (Aspergillus)

DANILYAK, H.I.; SAPIR, Z.I.

Cultivation of yeast in sweet mash. Spirt. prom. 24 no.3:33 '58.  
(MIRA 11:6)

(Yeast)

IVASHIN, A.I.; DANILYAK, N.I.; CHOPIK, V.I.

At the Polish Przeworsk Sugar Factory. Sakh.prom. 34 no.1:  
68-70 Ja '60. (MIRA 13:5)  
(Przeworsk, Poland--Sugar manufacture)

BRISH, V.N.; DANILYAK, N.I.

Utilize alcohol plants for the establishment of cannery sections.  
Kons.i ov. prom. 16 no.2:36-39 F '61. (MIRA 14:4)

1. L'vovskiy sovarkhoz.  
(Lvov Economic Region--Canning industry)

BRISH, V.N.; DANILYAK, N.I.; TUMANOV, B.A.

Combined production of starch and alcohol. Sakh.prom.35 no.3:65-67  
Mr '61. (MIRA 14:3)

I. L'vovskiy sovmarkhoz. (Starch) (Alcohol)

DANILYAK, N. I.; CHEREVKO, N. G.; KLEPIKOVA, R. A.

Stability of amylolytic ferments in storage. Spirt. prom. 28  
no.8:11-12 '62. (MIRA 16:1)

1. L'vovskiy soviet narodnogo khozyaystva (for Danilyak).
2. L'vovskiy gosudarstvennyy universitet im. I. Franko (for Cherevko).
3. L'vovskaya vysshaya partiynaya shkola (for Klepikova).

(Fermentation)

DANILYAK, N.I.; KAMINSKIY, R.S.

First Soviet Liqueur and Vodka Firm. Spirt. prom. 29 no.6:  
40-41 '63. (MIRA 16:10)

(Liquor industry)

DANILYAK, N.I.; CHEREVKO, N.G.

Effect of the active acidity of the culture medium on the  
anolytic enzymes of the "Aspergillus oryzae" mold fungus.  
Spart. prom. 29 no.7:11-15 '63. (MIRA 16:12)

1. L'vovskiy sovet narodnogo khozyaystva (for Danilyak).
2. L'vovskaya vysshaya partiynaya shkola (for Cherevko).

DANILKO, G.V.; YEGOROV, A.S.; DANILYAK, N.I.; KAMINSKIY, R.S.

Use of ion exchange substances for the purification of the rectified alcohol by the Lvov Liqueur and Vodka Factory. *Ferm. i spirt. prom.* 30 no.2:29-31 '64. (MIRA 18:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut spirtovoy i likero-vodochnoy promyshlennosti (for Danilko, Yegorov).
2. L'vovskiy sovet narodnogo khozyaystva (for Danilyak, Kaminskiy).

24.6000,16.8100,16.8300

77002  
SOV/56-37-6-42/55

AUTHORS: Burgov, N. A., Danilyan, G. V., Dolbilkin, B. S.,  
Lazareva, L. E., Nikolaev, F. A.

TITLE: Letter to the Editor. Fine Structure of a Gigantic  
Resonance

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,  
Vol 37, Nr 6, pp 1811-1814 (USSR)

ABSTRACT: In their work, R. Basile and C. Schuhl (cf., C. R. Paris,  
240, 2399, 1955) have shown that the yield curves of  
photonuclear reactions, in the case of light nucleus,  
exhibit a break in the region of the resonance. The  
position and the magnitude of the break depend on the  
substance. The data on the width  $\Gamma$  of these breaks  
are contradictory. Therefore, the existence of this  
resonance was investigated by the direct method. This  
method consisted of the investigation of the fine struc-  
ture of gigantic resonance by means of total absorption.  
The X-ray beam with maximum energy  $E_{\max} = 28.8$  mev was

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Letter to the Editor. Fine Structure  
of a Gigantic Resonance

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collimated with a Pb collimator 26 cm thick. Behind the collimator was a graphite block 60 cm ( $96.6 \text{ g/cm}^2$ ) thick. The spectrum of  $\gamma$ -quanta was measured by means of a paired spectrometer. The magnetic field in the spectrograph was stabilized by the "proton resonance" method with a precision better than  $\pm 0.01\%$  (at  $h\nu = 20 \text{ mev}$ , less than  $\pm 2 \text{ kev}$ ). The resolving power of the setup at  $9716 \text{ mev}$  ( $\gamma$ -line from the capture of thermal neutrons by  $\text{Cr}^{53}$  nucleus) was 65 kev. The experimental width of the peak observed for carbon nucleus was  $\sim 150 \text{ kev}$ . The integral cross section of the peak was  $9 \text{ mev} \times \text{mbn}$ . These results show that the method is effective in studying the fine structure of gigantic resonances. There is a schematic diagram of the setup; 1 graph; and 11 references, 2 French, 9 U.S. The 5 most recent U.S. references are: A. S. Penfold, B. M. Spicer, Phys. Rev. 100, 1377 (1955); C. Tzara, J. Phys. Rad., 17, 1001 (1956); L. Katz, National Bureau of Standards Photonuclear Conference,

Card 2/3

Letter to the Editor. Fine Structure  
of a Gigantic Resonance

77002  
SOV/56-37-6-42/55

Washington (1958); W. C. Barber, W. D. George, D. D.  
Reagan, Phys. Rev., 98, 73 (1955); M. V. Mihailovic,  
G. Pregl, G. Kernel, M. Kregur, Phys. Rev., in print.

ASSOCIATION: P. N. Lebedev Phys. Inst. Acad. Sciences USSR, USSR  
(Fizicheskiy institut imeni P. N. Lebedev Akademii  
nauk SSSR, SSSR)

SUBMITTED: August 26, 1959

Card 3/3

S/089/60/009/003/006/014  
B006/B063AUTHORS: Burgov, N. A., Danilyan, G. V., Korol'kov, I. Ya.,  
Shterba, F.TITLE: The Gamma Spectrum<sup>19</sup> of the TBP(TVR) Reactor /9

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 3, pp. 214-215

TEXT: The authors of the present paper used a gamma spectrometer of the "Elotron"-type to measure the spectrum of gamma rays emerging from a radial hole of the TVR reactor. The geometry of the experiment, which is briefly described in the introduction, is schematically represented in Fig. 1. Fig. 2 shows the entire measured spectrum (resolution of 1.25 per cent for  $E_{\gamma} \geq 2$  Mev). The peaks are numbered according to the numbering of the lines in the table. The second column of this table gives the energies of the various lines in Mev, and the values enclosed in brackets indicate the errors of the last places. The third column gives the relative intensities of the lines (accurate to about 10 per cent), and the fourth column gives the various possibilities of their identification. Individual lines were identified from data of Ref. 3. The fourth column further gives the

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The Gamma Spectrum of the TBP(TVR) Reactor

S/089/60/009/003/006/014  
B006/B063

elements emitting a certain line. The figures beside the symbols of the elements correspond to the numbering of the lines from Ref. 3. Altogether, 45 lines are considered. Fig. 3 shows the gamma spectrum related to uniform intervals  $\Delta Hq$ , taking in consideration the efficiency of the spectrometer as well as of the absorption of gamma quanta by the neutron filter. Specific features of several lines are briefly discussed, and comparisons are made with the results of other authors. Thus, for example, it was not possible to detect the line described in Ref. 6, which has an energy of  $4.062 \pm 0.010$  Mev and an absolute intensity of 7 per cent (gamma radiation from neutron capture of  $U^{238}$ ). It might be identical with a line of  $4.050 \pm 0.015$  Mev, which was found by the authors. The last neutron in  $U^{239}$  has a binding energy of  $4.63 \pm 0.15$  Mev, which is in good agreement with the gamma line No. 25 ( $4.640 \pm 0.015$  Mev). If  $U^{239}$  is assumed to be the emitter, the absolute line intensity amounts to 1% per capture. This value agrees with the results of Ref. 6 where this line was not observed. A considerable part of the gamma spectrum of the reactor remains unresolved, obviously due to gamma rays from neutron capture in  $U^{235}$  and  $U^{238}$ , and from fission events. There are 1 figure, 1 table, and 8 references: 5 Soviet, 2 US, and 1 Canadian.

SUBMITTED: February 24 1960

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S/056/62/043/001/010/056  
B125/B102

AUTHORS: Burgov, N. A., Danilyan, G. V., Dolbilkin, B. S., Lazareva,  
L. Ye., Nikolayev, F. A.

TITLE: Cross section for  $\gamma$ -quantum absorption by  $O^{16}$  nuclei in the  
giant resonance region

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,  
no. 1(7), 1962, 70-78

TEXT: The total cross section of  $\gamma$ -quantum absorption by  $O^{16}$  nuclei in  
the energy range 18.9-26.6 Mev was measured by the absorption method with  
a high-resolution pair magnetic gamma spectrometer used as the detector.  
The measurements were performed on the 250-Mev synchrotron of the FIAN at  
a maximum X-ray energy of 200 Mev. The X-ray pencil incident on the  
absorber (100 g/cm<sup>2</sup> distilled water) was monitored by a thin-walled ioniza-  
tion chamber (integrator). The electron-positron pairs were recorded by  
two plastic scintillators. The total cross section  $\sigma_{tot}$  for absorption in  
water was calculated from a measurement of  $N_o/N$  ( $N_o$  = number of

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Cross section for  $\gamma$ -quantum ...S/056/62/043/001/010/056  
B125/B102

coincidences without absorber,  $N$  = number of coincidences measured in the energy range 18.9-26.6 Mev with absorber) and was found to be  $(M/A(L)) \ln(N_0/N)$ , where  $M$  is the molecular weight,  $A$  is Avogadro's number,  $\rho$  is the density of the absorber, and  $L$  is its length. The cross section for  $\gamma$ -quantum absorption by  $O^{16}$  nuclei, obtained by subtracting the cross sections for pair production and for the Compton effect from the experimental value of  $\sigma_{tot}$ , has four distinct resonance peaks of several hundred kev width at 22.3, 23.05, 24.3, and 25.15 Mev. The sharpness of the resonances in the range 19-21 Mev (especially at 19.4 and 21.2 Mev) is insufficient for a discussion of the structure of the cross section. The integral absorption cross section for the energy range 18.9-26.6 Mev, which was calculated from the cross section for the  $O^{16}(\gamma, N)$  reaction to be  $150^{+30}_{-10}$  Mev $\cdot$ mb, is equal to the sum of the integral cross sections for the reactions  $O^{16}(\gamma, n)$  and  $O^{16}(\gamma, p)$ . For this reason, the cross sections for the other reactions in the giant resonance region are relatively small. There are 4 figures and 1 table.

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S/056/62/043/001/010/056  
B125/B102

Cross section for  $\gamma$ -quantum ...

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR  
(Physics Institute imeni P. N. Lebedev of the Academy of  
Sciences USSR). Institut teoreticheskoy i eksperimental'noy  
fiziki Akademii nauk SSSR (Institute of Theoretical and  
Experimental Physics of the Academy of Sciences USSR)

SUBMITTED: March 7, 1962

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1962

S/048/62/026/009/006/011  
B125/B186

1/ 2 100  
AUTHORS:

Danilyan, G. V., and Korol'kov, I. Ya.

TITLE:

Energy spectrum of the internal conversion pairs arising  
in the thermal neutron radiative capture in Gd

PERIODICAL:

Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26,  
no. 9, 1962, 1164-1168

TEXT: The energy spectrum of the internal conversion pairs was taken  
with a magnetic spectrometer. The thermal neutron beam ( $10^8 \text{ cm}^{-2} \text{ sec}^{-1}$ )  
of the horizontal channel of a heavy-water reactor was made incident on an  
emitter (aluminum foil with evaporated metallic gadolinium). This  
measuring apparatus was controlled via the thermal neutron capture  
 $\gamma$ -radiation in Cl. With increasing energy  $E_\gamma$  the number of internal  
conversion pairs at first increases rapidly, then more slowly. A distinct  
peak of coincidences (intensity 0.5 pulses/min) occurs at  $E_\gamma = 6.74 \text{ Mev}$ .  
For the coincidences I - III and II - IV this peak was weaker than the  
background of the random coincidences (0.5 pulses/min.) by at least one

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Energy spectrum of the internal...

S/048/62/026/009/006/011  
B125/B186

order of magnitude. It cannot be measured even if the measuring apparatus has an increased efficiency. All these improvements are possible only by (1) changing the pulse discrimination, (2) increasing the emitter thickness, (3) increasing the aperture by the use of larger crystals, (4) increasing the "light collection efficiency" of the crystal through a change in the shape of the light-pipes. These improvements are outbalanced by the increased background of the random coincidences. Even with spectrometers twice as large, only 4 to 5 isotopes with capture cross sections of  $\sim 10^4$  barn can be studied. Such an enlargement is not considered advisable. There are 4 figures.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki Akademii nauk SSSR (Institute of Theoretical and Experimental Physics of the Academy of Sciences USSR)

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AUTHOR: Burgov, N.A.; Danilyan, G.V.; Dolbilkin, B.S.; Lazareva, L. Ye.; Nikolayev, F.A.

TITLE: Levels in C<sup>12</sup> and O<sup>16</sup> observed in studying the <sup>19</sup>gamma absorption cross section in the region of the giant resonance /Report of the Thirteenth Annual Conference on Nuclear Spectroscopy held in KIEV from 25 January to 2 February 1963/

SOURCE: AN SSSR, Izv.Seriya fizicheskaya, v.27, no.7, 1963, 866-874

TOPIC TAGS: giant resonance, gamma-ray absorption, energy level , C<sup>12</sup>, O<sup>16</sup>

ABSTRACT: Investigations performed during the last decade indicate that the broad peak in the energy variation of the absorption cross section for light nuclei is actually a group of individual resonances and that what is called the giant resonance is actually the envelope of these individual resonances. Hence investigations of giant resonances can yield information on high-lying levels in light nuclei. One possibility for such studies is the use of continuous bromstrahlung with separation of a narrow gamma-ray interval by means of a detector with high resolution. By way of such a detector the authors designed a magnetic pair spectrometer. It was used for measuring the gamma-ray absorption cross sections of C<sup>12</sup> and O<sup>16</sup> in the 13 to 27 MeV interval. The equipment was used in conjunction with the Physical

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Institute 250 MeV synchrotron operated at a maximum bremsstrahlung energy of 200 MeV. The experimental arrangement is shown in Fig.1 of the Enclosure. The measurements disclosed a number of levels in  $C^{12}$  and  $O^{16}$  in the energy range from 16 to 27 MeV. There are listed in tables and the deduced energy values are compared with the experimental results of other investigators and the results of theoretical calculations. In many cases the agreement is good. The net results, however, point up the need for more thorough investigations of giant resonances using improved techniques and particularly detectors with higher resolution. Orig. art. has: 4 figures and 4 tables.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki Goskomiteta po mirnomu ispol'zovaniyu atomnoy energii SSSR (Institute of Theoretical and Experimental Physics, State Committee on Peaceful Uses of Atomic Energy, SSSR); Fizicheskiy institut AN SSSR im. P. N. Lebedeva (Physics Institute AN SSSR)

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NO REF SOV: 003

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L 17855-63

EWT(m)/BDS AFFTC, ASD

S/0048/63/027/007/ 0895/0899

ACCESSION NR: AP3003692

58  
54

AUTHOR: Pavlov, V.S.; Danilyan, G.V.; Korol'kov, I.Ya.

TITLE: Refinement of the decay scheme for In<sup>116</sup> /Report of the Thirteenth Annual Conference on Nuclear Spectroscopy held in Kiev from 25 January to 2 February

1963/  
SOURCE: AN SSSR, Izv, Seriya fizicheskaya, v.27, no.7, 1963, 895-899

TOPIC TAGS: isotope activation, nuclear spectrometry, decay schemes, In<sup>116</sup>

ABSTRACT: The primary purpose of the work was to evaluate the feasibility of using a closed loop activation system for studying the decay of short-lived nuclides by means of a magnetic gamma-spectrometer, in view of the fact that magnetic recoil spectrometers are characterized by high accuracy for obtaining energy and intensity values, but have the drawback of low efficiency, so that in the case of short-lived isotopes several activations are necessary to study the full spectrum. The activation loop consisted of two stainless steel tubes - one used as the source, the other located in the neutron flux near the core of a heavy-water reactor - a centrifugal circulating pump, an expansion chamber and appropriate stainless steel connecting tubing. The loop geometry was such that the irradiation time was about 20 sec; the transit time from irradiation tube to source tube about 8 sec; the full cycle

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time 50 sec. The total volume of the system was about 5 liters.  $In^{115}$  was selected for the test experiments; neutron capture by this isotope results in formation of  $In^{116}$  in the ground state ( $T = 13$  sec) and an isomeric state ( $T = 54$  min). The material was circulated in the activation loop in the form of a water solution of  $In(NO_3)_3$  (150 g per 5 liters water solution). The neutron and gamma background was attenuated by one  $B_4C$  and 10 steel blocks with a total length of 1500 mm. The gamma-ray spectrum of  $In^{116}$  was measured in the range from 0.7 to 1.8 MeV in 13 keV steps (10 min counting at each field value). The 13-sec activity was distinguished by damping ~~the~~ the reactor for 5 min intervals. The energies and intensities of the detected gamma-rays are tabulated together with the energy values reported by other authors. A refined decay scheme is presented (see Enclosure). "In conclusion we take this opportunity to thank N.A. Burgov for useful discussions and A.I. Zubkov and G.V. Rotter for assistance in the work. Orig.art.has: 1 formula, 4 figures and 1 table.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki Goskomiteta po mir-nomu ispol'zovaniyu atomnoy energii SSSR (Inst. of Theoretical & Experimental Physics, State Committee on Peaceful Uses of Atomic Energy, SSSR)

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